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An Evaluation of State Enterprise Zone Policies: Measuring the Impact on Business Decisions and Housing Market Outcomes: Dissertation Summary

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OVERVIEW

Despite overall economic growth, pockets of severe blight persist in our nation's cities and rural areas. There has been considerable debate in the economic development and regional science literature as to whether targeting policy initiatives at these distressed areas is the appropriate policy response. Nevertheless, over 40 states have proceeded to implement targeted policy in the form of enterprise-zone legislation since the early 1980s. Furthermore, the federal government has recently passed an enterprise-zone program. In December of 1994, President Clinton named 6 urban, 3 rural, and 2 supplemental empowerment zones and 60 urban, 30 rural, and 4 enhanced enterprise communities.

The dissertation examines the impact of state urban enterprise zones on business and housing market outcomes at the ZIP code level in six states: California, Florida, New Jersey, New York, Pennsylvania, and Virginia. In order to obtain consistent estimates of zone impacts, I limit the analysis to relatively similar subsamples of zone and non-zone areas. The estimated probability of zone designation is used to create comparison groups that control for differences in pre-designation characteristics. I find that, on average, zones have had little impact on business or housing market outcomes. New businesses create significantly more jobs in zones, but this positive impact is completely offset by a negative impact on previously existing zone establishments.

The data used to evaluate the six zone programs come from a number of sources. Detailed information about the programs was compiled from various documents provided by each state's program office and from U.S. Department of Housing and Urban Development publications. Outcome data come from three sources. Housing, demographic, income and unemployment information come from the 1980 and 1990 Censuses. Employment data come from an unofficial Census Bureau tabulation of the Standard Statistical Establishment List (SSEL). Establishment-level manufacturing panel data come from the U.S. Bureau of Census' Longitudinal Research Database (LRD).

Use of the LRD data to examine business outcomes represents an important contribution to the study of enterprise zones. By using establishment-level data, changes in employment levels and other outcomes can be attributed to new firms, ongoing firms, or firms that have closed. I find the distinction to be very important, and I show that enterprise zones have different impacts on the different types of firms. Additional contributions include the use of objective, non-survey data to measure outcomes and the use of multiple states in order to be able to draw wider implications of the findings.

CHAPTER 1. GEOGRAPHICALLY TARGETED ECONOMIC DEVELOPMENT

Chapter 1 of the dissertation focuses upon the theoretical justification behind the geographic targeting of economic development policy. The increasing use of enterprise zones has coincided with the increased popularity of targeting economic development policies.

The first section examines some of the reasons why economic development policymakers use geographically targeted incentives. Although the overall economic situation in this country has improved markedly in recent years, pockets of highly concentrated poverty and high unemployment remain. Over the past quarter century, the concentration of poverty in American cities has doubled to the point where now over 10 percent of all city residents live in neighborhoods in which 40 percent or more of the households live below the poverty line. There are multiple causes for this concentration, which leads to a spatial mismatch between where lower-income individuals live and where the jobs are located. Geographically targeting economic development programs may be an efficient way to implement policy in the face of concentrated distress. Such targeting may also be effective to address community

revitalization goals. Geographic targeting can also help to foster agglomeration economies, which are external economies that stem from business establishments locating near one another.

Section two provides a brief historical overview of enterprise zone legislation. The idea for the "modern" version of enterprise zones started in the late 1970s in the United Kingdom. With strong support from Chancellor of the Exchequer Geoffrey Howe, the newly elected Thatcher government started such a program in 1980. The idea quickly became popular in the United States, and individual states began starting their own programs shortly after the implementation of the British program. However, it was not until 1993 that the United States passed legislation for a federal program.

Enterprise-zone programs have had critics, and the final section of the chapter outlines some of the arguments against using targeted subsidies and tax breaks to attract businesses to a particular geographic area. It has been argued that it is better to target people instead of areas, that geographic targeting creates a zero-sum shuffling of economic activity, and that tax breaks and subsidies are not sufficient incentives to entice establishments to locate in the zone areas.

CHAPTER 2. STATE PROGRAMS

Chapter 2 focuses on the state programs. The great diversity of state enterprise-zone programs provides the opportunity for the evaluation of program success and failures. Unfortunately, there has been a scarcity of evaluative efforts of these programs and governmental programs in general.

The chapter begins by discussing the need for more evaluation. As the responsibility for government programs has increasingly shifted to the individual states, the diversity of the programs implemented has grown. Stuart Butler, an early proponent of the enterprise-zone concept, acknowledged the importance these state-level policy experiments: "Enterprise zones at the state level are indeed a set of laboratories in which a wide variety of economic development strategies are being tested, and where successes and failures will serve as a guide to better policies in the future."

Although state enterprise-zone programs are ideally suited for evaluation, comparatively little evaluation has actually been performed. Most of the evaluation that has been done has been very local, typically at the zone or state level. This type of evaluation does not help the local officials learn from the trials and errors of other zone experiments. For most states, the task of evaluating their own program is daunting enough. Few have ventured to study the performance of programs in other states.

A number of the early zone studies used case studies or surveys of zone administrators and participating businesses as part of their analysis. The surveys typically ask zone administrators about the incentives offered, what types of businesses have taken advantage of the program, and they ask the administrators to assess how many and what types of jobs/businesses/ investment the zone created. Surveys can be very informative, but they also have some shortcomings. It may be difficult for the administrator to objectively assess these outcomes, especially if he or she has a stake in the outcomes. Further, businesspeople have political incentives to exaggerate the benefits of tax cuts and other incentives even if they had little effect on the decisions actually made. The survey data may also be too vague to reveal the magnitude of the influence of particular incentives. Finally, without data from a comparison area, survey data cannot answer whether zone designation actually improves the economy in and around the zone. For these reasons, some researchers have more recently turned to econometric analysis.

Several econometric evaluations have been carried out at the state level. Papke found some evidence of a positive impact on unemployment claims of the Indiana enterprise-zone program using annual time series data from zone and non-zone Indiana cities. Boarnet and Bogart used a similar method but found no evidence that the New Jersey enterprise-zone program increased economic activity in the designated cities. Rubin and Wilder used shift-share analysis of an Indiana enterprise zone rather than regression analysis to isolate the zone impacts. They found a significant increase of jobs in the zone that they attributed primarily to zone incentives. This small sample of conflicting results suggests that the impact of state enterprise-zone policy may not be uniform. Almost all of the authors have acknowledged the pressing need for evaluative studies of enterprise zone programs.

Section two describes the enterprise data, which come from a variety of primary and secondary sources. I limited the focus of the dissertation to the large metropolitan areas of six states: California, Florida, New Jersey, New York, Pennsylvania, and Virginia. The information about which municipalities have zones, the designation dates, and the program features were collected from the coordinating agencies of the respective states. The detailed descriptions of program goals, incentives, eligibility criteria for participating

businesses, and zone designation criteria were compiled from various documents provided by each state's program office and from the U.S. Department of Housing and Urban Development publications.

All of the outcome data were collected at the U.S. Postal ZIP-code level. Enterprise-zone boundaries do not share boundaries with common geographic entities such as census tracts, ZIP codes, municipalities, or counties. The choice of ZIP codes represents a compromise based on the ability to identify ZIP codes that overlap enterprise zones and the availability of ZIP-code information on business establishments.

The outcome data come from three primary sources. Housing, demographic, income and unemployment information come from the 1980 and 1990 Censuses. Employment data come from an unofficial Census Bureau tabulation of the Standard Statistical Establishment List (SSEL). The SSEL is the Census Bureau's master address list of business establishments that is maintained for the economic censuses and employer surveys. The SSEL tabulation includes annual counts of establishments categorized by U.S. Postal ZIP code, cross-tabulated by four-digit SIC and employment class size. This is the same data as County Business Patterns, but it is aggregated to a more refined geographic level.

Establishment-level manufacturing panel data come from the U.S. Bureau of Census' Longitudinal Research Database (LRD). The LRD, which contains data on U.S. manufacturing plants with five or more employees, was developed by the Census Bureau to better investigate changes in the U.S. manufacturing sector over time. The LRD data is made up of the quinquennial Census of Manufactures (CM) and the Annual Survey of Manufacturers (ASM). Because each plant location is assigned a unique identification number, the LRD data can be used to track manufacturing establishments over time. The data available for each establishment include location, output quantities, and detailed information on the factors of production, such as the levels of capital, labor, energy, and materials used as inputs.

The final section provides a detailed description of the six different state programs. The programs differ along a number of dimensions, including when the programs were started, how many zones were designated, and the qualification criteria required to gain zone status. The actual economic incentives offered also vary from state-to-state.

CHAPTER 3. BUSINESS OUTCOMES

Chapter 3 examines the impact of the zone programs on business outcomes, the main target of zone incentives. The goals of zone programs often sound more like social policy rather than industrial policy: the reduction of unemployment, alleviation of poverty, etc. However, the implementation of the zone policy is focused almost entirely on affecting business decisions.

In this chapter, I first examine why business outcomes are an important outcome measure. I begin by looking at the reasons why businesses have ceased investing or reinvesting in urban areas. If the zone incentives are successful at overcoming some of the barriers, then there should be evidence of increased business activity inside the zones. Such increased activity is potentially beneficial for both the residents, who might see increased jobs, wages, and property values, and for the new and existing businesses, who may be able to increase their profits.

In the second section, I examine the expected impact of the zones if the incentives are successful. If the zone programs do encourage businesses to invest in the zones, I would expect to see greater use of elastically supplied factors of production and more intense use of the factors of production that are inelastically supplied. For factors that are inelastically supplied, I would also expect to observe price increases. In addition, incentives are expected to impact establishment location decisions. I also address the zero-sum argument, which claims that new business activity in the zones represents just a reshuffling of businesses instead of a net increase in business investment.

In the third section, I introduce the variables and provide descriptive statistics. I found that all six states placed their enterprise zones in the most distressed ZIP codes of their largest MSAs. Based on 1980 decennial Census socio-economic and housing indicators, zones were more densely populated, had lower per capita income, had higher poverty and unemployment rates, had lower high school graduation rates, and had higher percentages of minority residents than non-zones. Using 1990 decennial Census data, I found that zone ZIP codes continued to underperform the non-zone areas over the decade of the 1980s. Based on the 1982 Census of Manufactures data, I found that enterprise-zone ZIP codes are well-represented in the manufacturing industry. This is an industry that provides well-paying jobs, but it is also an industry that lost employment during the 1980s.

In the fourth section, I present the model that I use to estimate the impact of the zone incentives. Care must be taken to distinguish outcomes that are a result of prior economic conditions in the zone areas from outcomes that can be attributed to the zone policy. To help identify these outcomes, I create matched sample comparison groups of areas that have similar economic conditions but are not granted enterprise zones. I also create a comparison group based on geography in order to examine whether economic activity is merely being shifted around.

I use propensity scores to create the matched sample of comparison ZIP codes. I first estimate a model of the probability that a ZIP will be designated a zone. I estimate stepwise probit regressions for each state. The dependent variable is a variable that indicates whether or not the ZIP code ever had an enterprise zone, and the independent variables include a large set of pre-designation socio-economic, housing, and business condition indicators. The estimated probability of zone designation, or propensity score, is used to match this zone ZIP with the most similar non-zone ZIP code in each state.

After I create a suitable matched sample, I perform a difference-in-difference analysis to examine whether there are differences in pre-to-post designation differences in growth rates between zone ZIP codes and comparison ZIP codes. I examine five measures of economic growth: total employment, total dollar value of shipments, production worker payroll, expenditures on new buildings and machinery, and the number of establishments. To obtain my difference-in-difference estimates, the growth rates of those five measures are regressed on a series of zone designation indicator variables in negative binomial and tobit regressions.

The chapter's final section summarizes the results of those regressions. Based on the matched-sample difference-in-difference estimates, I found that zones lead mostly to a churning of economic activity. Zones did lead to new business activity inside the zones. The number of births and employment, payroll, and shipments due to those births all increased significantly in the zones post-designation. However, zones appeared to be less successful at retaining existing activity. Among existing establishments that were growing, employment, shipments, payroll, and capital spending all grew significantly more rapidly in the matched comparison areas. Further, estimates based upon geographic comparison groups did not provide evidence of a zero-sum-game stealing of businesses.

CHAPTER 4. HOUSING MARKET OUTCOMES

Chapter 4 examines the impact of enterprise zones on housing market outcomes. Housing values are important to examine because if the enterprise-zone incentives are successful, the real and anticipated changes in the desirability of an area to live and work should be reflected by the local housing prices. In addition to being an indicator of the success of zone incentives, housing market outcomes are important for zone residents and taxing jurisdictions.

In the first section of this chapter, I examine why housing market outcomes are an important outcome measure. If the zone policies successfully attract new business, stimulate employment growth or remove blight, then the increased value of zone land will be capitalized into the local housing prices. Therefore, I examine whether an impact on housing values, occupancy rates, and ownership rates can be detected in zone areas. Beyond serving as an indicator of zone effectiveness, housing market outcomes are important to examine because of their role in economic development. Reversing the decline of housing values in distressed areas may be an important part of neighborhood revitalization. Not only does raising the value of local property help boost tax revenues, but it might also help reduce house abandonment and help achieve the goal of greater rates of home-ownership among lower-income families.

In the second section, I review the previous literature and present some of the economic theory behind the impact of zone policy on housing market outcomes. Only a handful of studies have looked at the impact on real estate markets. Erickson and Syms, in a study of two British zones, found that zone designation reversed a decline in industrial rental prices inside the zone boundaries but did little to help rents on the zone periphery. Boarnet and Bogart found that New Jersey enterprise-zone incentives had no effect on property values. My initial work on housing market outcomes using the enterprise zone data is contained in two papers co-authored with John Engberg.

Economic theory suggests that enterprise zone development incentives affect housing markets in at least four ways. The net effect of zone policy on housing markets will depend on the relative importance of each of the components. First, zones incentives induce business activity that competes with households for zone property. The impact on housing prices will depend on the supply elasticity of land. Second, increased business activity in zones creates both

positive and negative externalities that affect the demand for housing. Positive externalities might include public goods such as transportation and public safety enforcement, while negative externalities might include congestion and pollution. Third, any increased employment and earnings created by zone businesses shifts out the demand for local housing. Fourth, if property taxes are raised to fund zone incentives, these tax increases will be capitalized into housing values. This will lower housing values for units in the taxing body relative to units outside the taxing body.

The third section presents more descriptive statistics. The LRD does not have information on housing prices, so this chapter uses data only from the SSEL and the 1980 and 1990 Censuses. The SSEL data showed that zones on average had lower employment growth (or bigger losses) between 1981 and 1982 and between 1981 and 1991 in both the manufacturing and retail/ services sectors than non-zone areas. The Census data showed that between 1980 and 1990, population and population density grew faster in the enterprise-zone ZIP codes than in the non-zone ZIPs. In all of the economic measures, the non-zone areas performed better than the zone areas. Mean poverty rates and unemployment rates fell slightly in the non-zone ZIPs, while they stayed the same or rose slightly in the zone ZIPs. Housing values, rents, owner occupancy rates, and per capita income all grew faster in the non-zone ZIPs.

In the fourth section, I present the model that I use to estimate the impact of the zone incentives. To create a comparison group of ZIP codes that have similar economic conditions but are not granted enterprise zones, I use methods similar to those in Chapter 3. However, instead of using matched-sample or geographically based comparison ZIPs, I use the propensity score in the regression equation to control for pre-designation differences. To examine the impact of zones on housing outcomes, I regress the average annual growth rate of housing values on the propensity score and an indicator of the fraction of the decade that the ZIP code had a zone. The coefficient on the propensity score estimates the impact of initial characteristics on the growth rates among the ZIP codes in the treatment and comparison subsamples. The coefficient on the zone indicator indicates the change in the growth rate for zone places that occurs after the designation of the zone.

The final section of the chapter reports the regression results. I find that the zone incentives do not significantly improve housing market outcomes in zone ZIP codes nor in neighboring ZIP codes. Analysis on income and employment outcomes yielded similar results. On the whole, enterprise zone legislation was found to have, at best, no impact on housing, income, and employment outcomes.

CHAPTER 5. SUMMARY AND IMPLICATIONS OF RESULTS

The trend in federal policy aimed at alleviating poverty continues to be to delegate the policy responsibility to the states and local governments. In response, the states often attempt to target their limited resources towards the localities that are in most need of help. For policymakers, it is crucial to know whether such geographic targeting is an effective way to combat our urban problems. My research found that although the states are successful at targeting the zone programs on the most distressed urban areas, zone incentives are generally not successful in raising levels of economic activity in zones above that which would have been expected had the zone policies not been implemented. On average, zones appeared to have little impact on business outcomes, which is consistent with previous research findings. However, by exploiting the establishment-level data, the study found that zones had a positive impact on the creation of new establishments and a negative impact on previously existing establishments. The housing market analysis indicated that zones failed to significantly improve housing market, income, or employment outcomes.

This research represents some results from a major effort to collect enterprise-zone program and location information on a majority of the state programs. Due to this data collection effort, this dissertation is one of the first enterprise-zone studies to avoid using survey data in a multi-state evaluation of enterprise-zone programs. The use of U.S. Census data provided a more impartial measure of outcomes than does survey data, and the multi-state approach yielded results that have wider implications than do the findings from just one program. The careful creation of comparison areas in the econometric analysis allowed me to measure the impact of the zone housing market, business, and employment relative to an estimate of what the outcomes would have been had the areas not been designated zones.

The use of the U.S. Bureau of Census' Longitudinal Research Database (LRD) is also an important step forward in the evaluation of zone programs. By using establishment-level data, changes in employment levels, shipments, payroll, capital spending, and the number of business establishments can be attributed to new firms, ongoing firms, or firms that have closed. I

found the distinction to be very important and showed that enterprise zones have different impacts on the different types of firms. These findings helped me to reconcile the seemingly contradictory results from previous studies. Consistent with early case-study and survey analysis, I found that zones do attract new businesses and that those new businesses created significantly greater employment, shipments, and payroll. This activity was offset by declines in those outcomes among existing businesses. Therefore, there was no overall net impact on employment due to the zones, and the impact on shipments and payroll was mixed. This is consistent with findings from other econometric studies that used data aggregated to the census tract or other geographic level.

Future research should seek to identify the particular aspects of the zone programs that appear to be helping new establishments. In addition, it will be important to attempt to identify why the programs are failing to help existing firms to expand employment, shipments, wages, and spending.